

Basonat[®] HW 1180 PC

Product description Basonat[®] HW 1180 PC is an aliphatic hydrophilic-modified polyisocyanurate for lightfast and weather-resistant water-based 2K polyurethane coatings

Key benefits

- 80% solution of Basonat[®] HW 1000 in propylene carbonate
- Based on isocyanurate oligomer
- High weather resistance
- Good light fastness
- Easy dispersable
- Good potlife and reactivity behavior

Chemical nature hydrophilic-modified polyisocyanurate based on hexamethylenediisocyanate (HDI)

Properties

Physical form Transparent, viscous liquid

Technical data (no supply specification)	NCO content	DIN EN ISO 11909	13 - 14%
	Non-volatile fraction	DIN EN ISO 3251	79 - 81%
	Viscosity (at 23 °C, D = 100 s ⁻¹)	DIN EN ISO 3219	450 - 850 mPa·s
	Platin cobalt color number (Hazen)	DIN EN ISO 6271	≤ 100

Application

Basonat® HW 1180 PC is a solution of a hydrophilic-modified polyfunctional isocyanurate oligomer in propylene carbonate.

Basonat® HW 1180 PC is used as hardener for polymer dispersions, alone and in combination with hydrophobic polyisocyanates. It can be directly incorporated into the formulated dispersion.

Basonat® HW 1180 PC can be directly used as hardener for water-based 2K PU topcoats for interior and exterior applications. An addition of 5-10% Basonat® HW on non-OH-functional polymer dispersions could improve chemical resistance and adhesion on difficult substrates.

Formulation guideline

In primary dispersions, Basonat® HW 1180 PC ideally crosslinks at a stoichiometric proportion of 100% NCO on OH groups of the dispersion without any drawback on potlife or reactivity. It is also possible to use lower stoichiometric levels for sufficient coatings properties from 40 to 70%.

For the use in secondary dispersions mostly the Index of NCO to OH of 150 is used for sufficient drying at an acceptable potlife. Basonat® HW could be combined with low viscous polyisocyanate like Basonat® HI 2000 or Basonat® HA to improve specific properties.

It is advised to take care that neither film forming agents (e.g. solvents), additives nor gelling agents do react with the isocyanate groups, i.e. any substances containing active hydrogen groups should be avoided.

The pH-value can be adjusted with tertiary amines such as dimethyl ethanolamine, triethyl amine and triethanol amine. The pH-value of the formulation decisively influences the potlife. A pH > 7 promotes the reaction of polyisocyanate with water and the amine.

Storage

Basonat® HW 1000 is sensitive to moisture. The ideal temperature range for storage is 0 to 30 °C and under airtight conditions (exclusion of humidity and atmospheric oxygen). Reaction with moisture will generate carbon dioxide which can lead to dangerous increase in pressure, while storage at high temperature will increase color and viscosity. After re-filling from original containers, a shorter shelf-life should be expected. Containers should be flushed with nitrogen before re-sealing.

Safety

When handling this product, please comply with the advice and information given in the safety data sheet and observe protective and workplace hygiene measures adequate for handling chemicals.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. The agreed contractual quality of the product results exclusively from the statements made in the product specification. It is the responsibility of the recipient of our product to ensure that any proprietary rights and existing laws and legislation are observed.

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